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Application No. 10/064,749  
Reply Brief To Examiner's Answer of October 07, 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number: 10/064,749  
Confirmation Number: 8455  
In re Application of: Robert David Darrow et al.  
Filed: 08/13/2002  
Group Art Unit: 3737  
Examiner: Joel Lamprecht  
Docket Number: RD27658-1

For: MEDICAL DEVICE POSITIONING SYSTEM AND METHOD

**REPLY BRIEF TO EXAMINER'S ANSWER DATED OCTOBER 07, 2009**

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December 7, 2009

/Patrick K. Patnode/  
Patrick K. Patnode

In Response to the Examiner's answer dated October 07, 2009, please consider the following Reply Brief that includes a Status of Claims on page 2, Grounds for Rejection on page 3, and Arguments starting on page 4.

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#### STATUS OF CLAIMS

Claims 1, 2, 4-17 and 19-32 are currently pending, are currently under final rejection and, thus, are the subject of this Appeal. Claims 3 and 18 were canceled. The Examiner rejected claims 13-17, 19-22 and 30-31 under 35 USC § 112, claims 1, 2, 4-10 and 23-29 under 35 USC § 102(b) and claims 11, 12, 24, 25 and 32 under 35 USC § 103(a). Of these, claims 1, 13, 23 and 32 are independent.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

**First Issue for Review on Appeal:**

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 13-17, 19-22 and 30-31 under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

**Second Issue for Review on Appeal:**

Appellants respectfully urge the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claims 1, 2, 4-10 and 23-29 under 35 USC 102(b) as being anticipated by Dumoulin et al. (US Patent No. 5,251,635, hereinafter "Dumoulin").

**Third Issue for Review on Appeal:**

Appellants respectfully urge the Board to review and reverse the Examiner's third ground of rejection in which the Examiner rejected claim 32 under 35 USC 102(b) as anticipated by Dumoulin, or in the alternative under 35 USC 103(a) as obvious over Dumoulin.

**Fourth Issue for Review on Appeal:**

Appellants respectfully urge the Board to review and reverse the Examiner's fourth ground of rejection in which the Examiner rejected claims 24, 25 and 32 under 35 USC 103(a) as being obvious over Dumoulin.

**Fifth Issue for Review on Appeal:**

Appellants respectfully urge the Board to review and reverse the Examiner's fifth ground of rejection in which the Examiner rejected claims 11 and 12 under 35 USC 103(a) as being unpatentable over Dumoulin and further in view of Panescu et al. (US Patent No. 5,916,163, hereinafter "Panescu").

## **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims. Accordingly, Appellants respectfully request full and favorable consideration by the Board, and reversal of the outstanding rejections. Appellants strongly believe that claims 1, 2, 4-17 and 19-32 are currently in condition for allowance.

### **First Ground of Rejection**

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 13-17, 19-22 and 30-31 under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

In the Appeal Brief filed on June 10, 2009, Appellants had argued independent claim 13 teaches the capability of a processor to respond to change in the position of a medical device by repositioning the medical device within a target region of interest without moving the subject and this is well understood to a person skilled in the art for a system that could be used for delivery of many different diagnostic and interventional devices. The processor is an integral part of the system; where the system can be used to guide the biopsy needle guide. The Examiner argued in the Examiner's answer that the specification does not provide such teaching or capability of processor element. The Appellants do not agree with the Examiner. Appellants would like to draw attention of the Examiner to paragraph [0025] of the present application.

A portion of the paragraph [0025] reads:

"Such a system could be used for delivery of many different diagnostic and interventional devices. For example, it could be used to guide the placement of a therapeutic laser, or a biopsy needle guide."

Clearly, independent claim 13 complies with the written description requirement in the specification. Claims 14-17, 19-22, and 30-31 depend directly or indirectly on claim 13. Accordingly, Appellants respectfully submit that claims 14-17, 19-22, and 30-31 are allowable by virtue of their dependency from allowable base claim. Further, claims 14-17, 19-22, and 30-31 are also allowable by virtue of the subject matter they separately recite. Thus, it is respectfully requested that the rejection of claims 13-17, 19-22 and 30-31 under 35 USC § 112 be reversed.

**Second Ground of Rejection:**

Appellants urge the board to review and reverse the Examiner's second ground of rejection of claims 1, 2, 4-10 and 23-29 under 35 USC 102(b) as being anticipated by Dumoulin.

In the Appeal Brief filed on June 10, 2009, Appellants had argued that Dumoulin fails to teach or disclose the independent claim 1 and 23 and specifically the recitation of positioning of the medical device within the target region of interest without moving the subject. In the Examiner's answer the Examiner has argued that the support arm in Dumoulin cannot reposition the invasive device within the body, as the support arm only controls the table upon which the patient is resting, the images produced by Dumoulin allow for the operator to track the medical device within the region of interest, the medical device is repositioned by the operator using a guide wire or other control device attached to the catheter within the body. Appellants respectfully disagree. Dumoulin fails to disclose or suggest positioning of the medical device within the target region of interest without moving the subject. Dumoulin discloses automatic placement and alignment of the subject by use of a support arm within a desired region around invasive device. See Dumoulin, column 7, lines 24-27.

Appellants would like to draw the attention of the Examiner in particular to Col. 7 lines 24-37 of Dumoulin that clearly points out that automatic alignment and placement of the subject around the location of the invasive device is facilitated by use of a support arm. The calculated position of the invasive device from the tracking computer is supplied to a positioning means that controls the position and orientation of support arm in relation to the support table. An X-ray image can be also initiated whenever an invasive device enters a region of the subject for which an additional X-ray image is required. This embodiment frees the operator from the task of keeping invasive device within the field-of-view of the X-ray system and potentially reduces the number of assistants that the operator requires. (Emphasis added)

Furthermore, Appellants have carefully reviewed Dumoulin and respectfully submit that Dumoulin fails to disclose or suggest a medical device monitoring and positioning subsystem as in the present claims. The monitoring subsystem disclosed in Dumoulin is configured only to track the medical device within the subject by repeated acquisition of images. (See, Column 2, lines 59-68 and Column 3, lines 1-6)

Appellants reiterate that Dumoulin clearly fails to teach each and every element of claims 1 and 23. Hence Dumoulin cannot support a *prima facie* case of anticipation of independent claims 1 and 23.

Claims 2, 4-10 and 24-29 depend directly or indirectly from claims 1 and 23. Accordingly, the Appellants respectfully submit that claims 2, 4-10 and 24-29 are allowable by virtue of their dependency from allowable base claims. Further, claims 2, 4-10 and 24-29 are allowable by virtue of the subject matter they separately recite. Thus, the Appellants respectfully request the Board to reverse the rejection of claims 1, 2, 4-10 and 23-29 under 35 USC 102(b).

**Third Ground of Rejection:**

Appellants urge the board to review and reverse the Examiner's third ground of rejection of claim 32 under 35 USC 102(b) as anticipated by Dumoulin or in the alternative under 35 U.S.C. § 103(a) as being unpatentable over Dumoulin.

In the Appeal Brief filed June 10, 2009, Appellants had argued that Dumoulin fails to disclose or describe any claimed predetermined or pre-programmed responses such as terminating therapy or repositioning the medical device within the target region of interest without moving the subject or activating an audio or a text advisory feedback to the interface unit whatsoever. The Examiner's argument in Examiner's answer that the argument (B) apply mutandi mutandis to claim 32. Appellants disagree with the Examiner. Appellants submit that there is no teaching or suggestion of any claimed predetermined or pre-programmed responses in Dumoulin and the Examiner has failed to apply a reference that includes all of the recited features of claim 32.

Thus, Appellants respectfully request the Board that the rejection of claim 32 under 35 USC 102(b) and 35 USC 103(a) be reversed.

**Fourth Ground of Rejection:**

Appellants urge the board to review and reverse the Examiner's rejection of claims 24, 25 and 32 under 35USC 103(a) as being obvious over Dumoulin.

Appellants respectfully submit that while Dumoulin discloses superimposed visual icon on the X-ray image of the subject to represent the tracked medical device, Dumoulin fails to teach or suggest an audio or text advisory feedback such as "Device has moved. Laser has been shut down" or text output such as "Device has moved. Do you wish to reposition?" (See

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Application, paragraph 0027 and 0032). Clearly, the visual icon representing the tracked medical device in Dumoulin cannot be equated to displaying text or audio advisory feedback as in the present application and would not be obvious to a person skilled in the art as argued by the Examiner. Therefore, Appellants request the Board to withdraw rejection of claims 24, 25 and 32 under 35 USC 103(a).

**Fifth Ground of Rejection:**

Appellants urge the board to review and reverse the Examiner's rejection of claims 11 and 12 under 35 USC 103(a) as being unpatentable over Dumoulin and further in view of Panescu.

Claims 11 and 12 depend directly or indirectly from claim 1 and are allowable by virtue of their dependency from the base claim. Further, the claims are allowable for the subject matter they separately recite. Thus, it is respectfully requested that the Board reverse the rejections of claims 11 and 12 under 35 USC 103(a).

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**Summary**

For the reasons set out above, Appellants respectfully request that the Board reverse the rejections and indicate the allowability of the pending claims.

Respectfully submitted,

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